NIKITENKO, R.D.

Accumulation of radioactive phosphorus in rabbits with experimental tumors of the bones. Uch.zap. KRROI 7:137-144'61.
(MIRA 16:8)

(BONES—CANCER) (PHOSPHORUS ISOTOPES—THERAPEUTIC USE)

NIKITENKO, R.D.; BAMAN, L.A.

Effect of X-ray irradiation on the development of an intraosseous transplanted tumor of the LOI strain. Vrach. delo no.12:23-28 D '61. (MIRA 15:1)

1. Laboratoriya eksperimental'noy terapii raka (rukovoditel' - akademik AN USSR prof. R.Ye.Kavetskiy) i otdela luchevoy terapii (rukovoditel' - kand.med.nauk V.I.Guz') Kiyevskogo nauchno-issledovatel'skogo rentgenoradiologicheskogo i onkologicheskogo instituta.

(BONES--TUMORS) (X RAYS--THERAPEUTIC USE)

AUTHOR: Nikitenko, R.N., Engineer. 129 - 8 - 2/16

TITLE: Properties of deformable (ductile) alloys of the system Ti - Al at elevated temperatures. (Svoystva deformiruemykh splavov sistemy titan-alyuminiy pri povyshennykh temperaturakh.)

PERIODICAL: "Metallovedenive i Obrabotka Metallov"(Metallurgy and Metal Treatment), 1957, No.8, pp. 7-14 (U.S.S.R.)

ABSTRACT: The aim of this paper was to study the Ti-Al ductile alloys produced from commercial titanium. The alloys were produced in a high-frequency arc furnace in a rarified argon atmosphere from Ti sponge (containing 0.02% C, 0.08 - 0.1% Si, 0.38 - 0.4% Fe, 0.006 - 0.015% Mg) and electrolytic (99.99% Al) aluminium chips. The produced castings were forged into rods of 12 mm dia. which were annealed at 750 C for one hour and cooled in air. The titanium alloys are mainly intended for operation at 300 - 500 C and their practical use is limited to a considerable extent by embrittlement during operation at elevated temperatures. Therefore, the author investigated: the behaviour under tension at 20 - 550 C; the hardness in the hot state, up to 1 000 C; the influence of long duration oxidation at 350 - 500 C on the mechanical properties and the long duration hot hardness at 200 - 600 C. The measured

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Properties of deformatble (ductile) alloys on the system Ti - Al at elevated temperatures. (Cont.) 129 - 8 - 2/16

mechanical properties of cylindrical specimens with an effective diameter of 3 mm for commercial titanium and for alloys containing 2.5, 4, 5.4 and 7% Al are entered in Table1 for test temperatures of 20, 150, 250, 350, 450 and 550 C, respectively. Table 2, p.11, gives the mechanical properties for alloys of equal composition after exposing the specimen to oxidation at 350 - 500 C for 100 hours. The graph, Fig.1, shows the change of the relative elongation as a function of the temperature for temperatures up to 550 C, whilst the graph, Fig. 2, shows the influence of the test temperature on the uniform deformation. The change in the inclination angle, as a function of the temperature, of the real tensile stress diagram is shown in the graph, Fig.3, for Ti and various Ti - Al alloys; the influence of temperature on the hardness of Ti - Al alloys is shown in the graph, Fig.4, whilst the graph, Fig. 5, shows the relation between the hardness and the ultimate strength of the Ti - Al alloys between 20 and 500 C. Fig. 6 shows the specific electrical resistance of Ti-Al alloys before ageing and after ageing at 450 C for 100 hours. The graph, Fig.7, shows the influence of the aluminium content on the one hour hardness values of Ti - Al alloys for the temperatures 200, 300, 400, 500 and

Card 2/4

NIKITENKO, R.N.

Characteristics of plasticity and aging of binary titanium-aluminum alloys. Titan i ego splavy no.3:41-51 '60.
(MIRA 13:7)

(Titanium-aluminum alloys--Metallography) (Metals at high temperatures)

NIKITENKO, S., master.

Experience in the use of wooden runners. Kinomekhanik no.8:36 Ag '53. (MLRA 6:8)

1. Kinoremontnyy punkt, Mostovoye, Krasnodarskiy kray.
(Moving-picture projectors)

KREMENSKAYA, N.L.; NIKITENKO, S.F.

Spring and fall frosts in Kursk and Belgorod Provinces. Sbor. rab. po sinop. no.3:25-42 '59. (MIRA 12:11)

1.Upravleniye gidrometeorologicheskoy sluzhby (UGMS) TSentral'no-chernozemnykh oblastey.
(Kursk Province--Frost) (Belgorod Province--Frost)

ACCESSION NR: AT4026440 S/3082/63/000/008/0053/0067

AUTHOR: Kremenskaya, N. L.; Nikitenko, S. F.

TITLE: Cold waves in Bryansk, Orlovsk, Kursk and Belgorod Oblasts

SOURCE: USSR. Glavnoye upravleniye gidrometeorologicheskoy sluzhby*. Sbornik rabot po regional'noy sinoptike (Collection of works on regional forecasting), no. 8, 1963, 53-67

TOPIC TAGS: meteorology, air temperature, temperature extreme, circulation index, regional climatology, climate, weather forecasting, long-range weather forecasting

ABSTRACT: Cold waves occurring in October, November and December in Bryansk, Orlovsk, Kursk and Belgorod Oblasts are analyzed. The quantitative criterion for the temperature change during the passage of a cold wave is a drop of the minimum air temperature to -5C or lower. The oblasts mentioned are unprotected from cold air intrusions from the west and north, but forecasting of cold waves is facilitated by the ability to trace the advance of cold air toward the area for two or three days before its arrival. There are few Soviet studies of cold waves and none for the region discussed. Part I discusses the climatic characteristics of cold waves for the area. The tables indicate the detailed nature of the study: 1 -- mean, maximum and minimum number of days with temperatures of -5C or lower by

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ACCESSION NR: AT4026440

ten-day periods, months and years; 2 -- mean and absolute maximum intensity of cooling by ten-day periods, months and years; 3 -- relationship between intensity of cooling and number of days with cooling for October, November and December; 4 -- mean, mean minimum and mean maximum number of days with cooling, 1951-1960; 5-- mean, mean minimum and mean maximum intensity of cooling, 1951-1960. Most of the tables are prepared on the basis of data for 25 stations. Part 2 discusses the relationship between the number of days with cooling and the intensity of cooling and anomalies of the mean monthly air temperature; a large number of relationships of prognostic value were determined from this analysis. Part 3 gives the actual prognostic criteria developed for use in predicting cold waves; the method makes it possible to establish the relationship between the number of days with cooling (to -5C or lower) and the intensity of this cooling on the index of zonal circulation. Examples of forecasts are given. Orig. art. has: 4 formulas and 10 tables.

ASSOCIATION: KURSKOYE BYURO POGODY☆ (Kursk Weather Bureau)

SUBMITTED: 00	DATE ACQ: 16Apr64	ENCL: 00
SUB CODE: AS	NO REF SOV: 003	OTHER: 000

Card 2/2

SOROKIN, Gennadiy Mikhaylovich; GLYAZER, L., red.; KOMINA, Ye., red.; GRIGOR'YEVA, I., mladshiy red.; KOROLEVA, A., mladshiy red.; NIKITENKO, T., mladshiy red.; MOSKVINA, R., tekhn.red.

[Planning the national economy of the U.S.S.R.; problems of theory and organization] Planirovanie narodnogo khoziaistva SSSR; voprosy teorii i organizatsii. Moskva, Izd-vo sotsial'no-ekon. lit-ry, 1961. 458 p. (MIRA 14:6)
(Russia—Economic policy)

NIKITENKO, T.F.

NIKITENKO, M.F.; NIKITENKO, T.F.

Characteristics of cell nucleus formation in the tissues of vegetative hybrids. Dokl.AN SSSR 95 no.3:649-652 Mr '54. (MLRA 7:3)

Predstavleno akademikom V.N.Sukachevym. (Plant cells and tissues)

MIRONOV, V.Ye.; KUL'BA, F.Ya.; FEDOROV, V.A.; NIKITENKO, T.F.

Effect of alkali metal cations on the formation of chloride complexes of bismuth. Zhur. neorg. khim. 8 no.10:2318-2322 O '63. (MIRA 16:10)

1. Leningradskiy tekhnologicheskiy institut, kafedra obshchey khimii.

(Alkali metals) (Bismuth compounds)

137-58-5-10745

NIKITENKO, V.D.

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 257 (USSR)

AUTHORS: Grayfer, Ye. F., Imshenetskiy, V. I., Nikitenko, V. D.

TITLE: Improving the Chemical Properties of Kh25 and Kh28 High-chromium Steels (Povysheniye khimicheskikh svoystv vysokokhromistykh staley Kh25, Kh28)

PERIODICAL: Byul. nauchno-tekhn. inform. Ukr. n.-i. in-t metallov 1957, Nr 3, pp 85-91

ABSTRACT: Kh25 (EI 181) and Kh28 (EI 349, EZh 27) steels are distinguished by an undesirable tendency toward grain growth when heated >900°C, such coarse granular structure not being susceptible to correction by subsequent heat treatment. The only method of correcting the structure of such steels is by a high degree of deformation ending at low temperature and not accompanied by any significant degree of recrystallization. Experimental work under various conditions was undertaken at the Dneprospetsstal' plant with the object of finding optimal conditions for heating and forging that would guarantee the mechanical properties of these steels in accordance with GOST (All-Union State Standard) 5949-51. The optimum technology

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137-58-5-10745

Improving the Chemical (cont.)

proved to be one in which forging terminated at not over 800°, and the work hardening thus produced was removed by high-temperature tempering at 700° for 8 to 10 hours.

I G

1. Steel--Chemical properties 2. Chromium--Chemical effects

Card 2/2

MOGIL'CHENKO, V.S., inzh.; NIKITENKO, V.D., inzh.; MININZON, R.D., insh.; RUDNEVA, N.V., inzh.

Carbon reduction in the surface layer of ball-bearing and tool steels. Stal' 23 no.9:839-840 S '63. (MIRA 16:10)

1. Institut ispol'zovaniya gaza AN UkrSSR i Dnepropetrovskiy Staleplavil'nyy zavod vysokokachestvennykh i spetsial'nykh staley.

NIKITENKO, V.F.; YATSENKO, B.G., inzh. lesnogo khozyaystva

Protective tree belts; readers continue the discussion. Put' i put. khoz. 7 no.5:39 '63. (MIRA 16:7)

1. Dolgintsevskaya distantsiya Pridneprovskoy dorogi (for Nikitenko). 2. Stantsiya Pologi, Pridneprovskoy dorogi (for Yatsenko).

(Windbreaks, Shelterbelts, Etc.)

NIKITENKO, V.F. [Nikytenko, V.F.]; PYATIGORSKIY, B.Ya. [P'aityhors'kyi, B.IA.]; SOROKINA, Z.A. [Sorokina, Z.O.]

Electrometric amplifier in using high-ohm glass microelectrodes. Fiziol. zhur. [Ukr.] 10 no.3:407-409 My-Je '64. (MIRA 18:9)

1. Laboratoriya obshchey fiziologii Instituta fiziologii im. A.Bogomol'tsa AN UkrSSR, Kiyev.

ANOKHIN, S.I.; ANTSUK, D.N.; GUTSEV, Ye.G.; GOLOVANCHIKOV, I.Ya.; NIKITENKO, V.G.; SHELELYAYEV, A.I.; MARTINKEVICH, F.S., red.; PASHKEVICH, O.N., red.; VASIL'YEVSKIY, I., red. izd-va; VOLOKHONOVICH, I., tekhn. red.

[Improving the efficiency of large-csale transports in the White Russian S.S.R.]Ratsionalizatsiia perevozok massovykh gruzov v Belorusskoi SSR. Minsk, 1963. 241 p.
(MIRA 16:7)

1. Akademiya navuk BSSR. Minsk, Instytut ekonomiki.
(White Russia—Freight and freightage)

OLEFIR, F.F.; BOBRANITSKIY, Yu.P., kand. tekhn. nauk, [illegible], V.I., NIKITENKO, V.G.

Experience in using a digital delay system in a reversing cold rolling mill. Avtom. i prib. no.3:8-10 Jl-S '64. (MIRA 18:3)

PAVLENKO, I.I.; NIKITENKO, V.I.

Equipment for feeding the mold wash to the working area. Lit. proizv. no.2:45 F '65. (MIRA 18:6)

S/070/61/006/003/003/009
E036/E435

24,7500 (1144, 1160, 1482)

AUTHORS: Nikitenko, V.I. and Indenbom, V.L.

TITLE: Comparison of stresses and dislocations in a germanium crystal

PERIODICAL: Kristallografiya, 1961, Vol.6, No.3, pp.432-438

TEXT: Using photoelasticity, the distribution of stresses across a slice from a germanium ingot is measured. The stress field is calculated and the corresponding temperature field is compared with the dislocation distribution. The slice investigated was cut parallel to the (III) plane and the distribution of dislocations determined from etch pits. Bi-refringence was measured between the slice faces along two slice diameters using infrared radiation. The amount of bi-refringence was determined by placing the sample between crossed polaroids and measuring directly by means of photoconductivity as well as the usual quartz wedge and Senarmont compensator. Scatter of results by the three methods was 10 to 20%. A plot of path difference along the diameter gives a parabolic law with the exception of parts close to dislocation clusters. The photoelastic constants required to

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convert the bi-refringence into stresses were found by compressing prisms of various orientations. Scatter is large but no worse than other workers have experienced on Si and diamond. From the stresses and using Yu.I.Sirotin's results (Ref.13 Kristallografiya, 1, 6, 708-717, 1956) the stresses in the ingot, at the place where the slice was removed, can be calculated. From these, using a method due to E.Billig (Ref.15: Proc.Roy.Soc. A, 235, 1200, 37-55, 1956), the dislocation density is calculated and compared with the experimental determination and this is shown in Fig.4, where dislocation density ($10^4 cm^{-2}$) is plotted against distance along the diameter (r/R), R being the slice radius. The line is the calculated distribution and the points are the experimental values. The results are similar to those obtained by P.Penning (Ref.17: Philips Res. Repts, 13, 1, 79-97, 1958). The discrepancies between observation and calculation are thought to be due to the dislocations not completely compensating the temperature drop and the thermoelastic stresses which arise. The tangential stresses determined in the experiment also agreed qualitatively with the dislocation distribution. Information can be obtained about the thermoelastic stresses acting during the

Comparison of stresses ...

crystal pulling. Acknowledgments are expressed to G.I.Distler and V.I.Chudakov for their assistance. There are 4 figures, 2 tables and 17 references: 6 Soviet-bloc and 11 non-Soviet-bloc. The four most recent references to English language publications read as follows: R.Bullough, Phys.Rev., 115, 4, 723-726, 1957; J.Hornstra, P.Penning, Philips Res.Repts, 14, 3, 237-249, 1959; S.R.Lederhandler. J.Appl.Phys., 30, 11, 1631-1638, 1959; P.Penning. Philips Res.Repts, 13, 1, 79-97, 1958.

ASSOCIATION: Institut kristallografii AN SSSR
(Institute of Crystallography AS USSR)

SUBMITTED: August 12, 1960

Card 3/4

Comparison of stresses ...

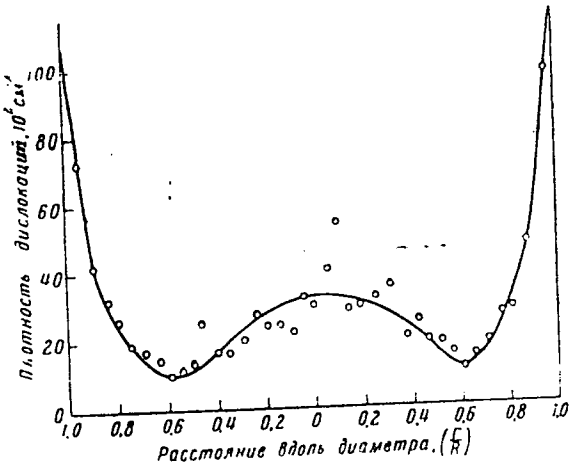

Fig.4.

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S/020/61/141/006/013/021
B104/B112

AUTHORS: Indenbom, V. L., Nikitenko, V. I., and Milevskiy, L. S.

TITLE: Observation of internal stresses around dislocations in silicon

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 141, no. 6, 1961, 1360 - 1362

TEXT: The observation of decorated and nondecorated dislocations in silicon by an electron-optical transducer is described. The experimental arrangement consisted of a usual polarization microscope (with Nicol prisms) and a БЭИ-3 (BEI-3) electron-optical transducer. An ОИ-24 (OI-24) lamp with infrafilter was used as light source. Dislocations were oriented strictly parallel to the direction of observation by a special breeding method. Crystal breeding was carried out in direction [110]. 2 - 3 mm thick plates were cut out at right angles to the breeding axis, and polished. As was shown by experiments with polarized light, there exists a birefringence field of rosette-shaped character in the vicinity of dislocations.

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S/020/61/141/006/013/021
B104/B112

Observation of internal stresses...

This agrees with results of a previous paper by V. L. Indenbom et al. (Kristallographiya, 2, 190 (1957)) according to which the birefringence field around dislocations (when the crystal is considered to be isotropic) can be described by the formula $r = C\cos\Theta\cos 2(\Theta - \alpha)$. Θ is the azimuth counted from the slip plane, α is the angle between this plane and the polarization plane, C is a constant proportional to the marginal component of the Burgers vector of dislocation, to the hardness of the crystal, and to the photoelastics constant. The pattern of microstresses around dislocations changes completely after decorating. The rosette changes, and the signs of birefringence in the individual rosette fields which differed before decorating become equal. Microstresses around decorated dislocations are radially compressed and tangentially elongated. In usual decorating, intensity of the microstresses around dislocations increases somewhat, original microstresses disappear, and curvilinear dislocations may be observed besides rectilinear ones. Only macrostresses produced by the effect of many dislocations are conserved. Redistribution of stresses around dislocations decreases with decreasing impurities. The authors thank Professor M. V. Klassen-Neklyudova for interest and V. D. Khvostikova

Card 2/3

for assistance in crystal breeding. There are 3 figures and 9 references: 5 Soviet and 4 non-Soviet. The three most recent references to English-language publications read as follows: W. L. Bond, J. Andrus, Phys. Rev., 101, 1211 (1956); R. Bullough, Phys. Rev., 110, 620 (1958); W. C. Dash, J. Appl. Phys., 29, 705 (1958).

ASSOCIATION: Institut kristallografii Akademii nauk SSSR (Institute of Crystallography of the Academy of Sciences USSR)
Institut metallurgii im. A. A. Baykova Akademii nauk SSSR (Institute of Metallurgy imeni A. A. Baykov of the Academy of Sciences USSR)

PRESENTED: June 5, 1961, by A. V. Shubnikov, Academician

SUBMITTED: May 30, 1961

33361
S/181/62/004/001/036/052
B104/B112

24,7500 (1144, 1160, 1482)

AUTHORS: Indenbom, V. L., Nikitenko, V. I., and Milevskiy, L. S.

TITLE: Polarization-optical analysis of the dislocation structure of a crystal

PERIODICAL: Fizika tverdogo tela, v. 4, no. 1, 1962, 231 - 235

TEXT: The polarization-optical method makes it possible to establish all the characteristics of the dislocation structure in crystals of low dislocation density. A plate with a perpendicular [001] axis, cut out of a Si single crystal parallel to the (110) plane, was used for determining the Burgers vector and for investigating various types of dislocation, such as sessile dislocations (Fig. 2) and dislocations with glide planes coinciding with the $(1\bar{1}1)$ and $(\bar{1}11)$ planes (60° dislocations). The formation of sessile dislocations from the 60° dislocations is described by $\frac{a}{2}[101] + \frac{a}{2}[0\bar{1}\bar{1}] \rightarrow \frac{a}{2}[1\bar{1}0]$, according to which one 60° dislocation glides along the $(\bar{1}11)$ plane and hits the other 60° dislocation gliding along the $(1\bar{1}1)$ plane. The Burgers vectors of the 60° dislocations form

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L 18904-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD

ACCESSION NR: AT3001909 S/2912/62/000/000/0168/0174

AUTHORS: Indenbom, V. L., Nikitenko, V. I., Milevskiy, L. S.

TITLE: Dislocational structure of Si.

SOURCE: Kristallizatsiya i fazovyye perekhody*. Minsk, Izd-vo AN BSSR, 1962, 168-174.

TOPIC TAGS: crystal, crystallization, crystallography, crystalline, structure, dislocation, single crystal, growth, defect, slippage, etching, decoration, Si.

ABSTRACT: The paper describes a comparative evaluation of various methods for the inspection of dislocational structures in Si, with particular emphasis on the polarized-light optical method. A comparison of the results of various methods in the discovery of dislocations in a thin lamina of Si is shown. The lamina was cut perpendicularly to the axis of an ingot grown along {110} by the Chokhral'skiy method. The methods are: Photography in polarized IR light, selective etching, and Cu decoration of the dislocations. The characteristics of the images obtained are discussed in detail. The atomic scheme of the formation of edge dislocations is illustrated for three possible arrangements: (a) two 60° dislocations placed at a distance of one lattice parameter; (b) formation of an edge dislocation; (c) edge

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L 18904-63

ACCESSION NR: AT3001909

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dislocation with the same orientation arising upon slippage along the (001) plane in the direction of easiest slippage. The graphs include an indication of the Burghers vector. It is concluded that the optical method for the investigation of dislocations is a valuable adjunct in the solution of the problem of inspecting and controlling the dislocational structure of a growing crystal. "In conclusion, the authors regard it their pleasant duty to express their gratitude to Prof. M. V. Klassen-Neklyudova for her attention to the study, and to D. B. Khvostikova for her kind cooperation in the growing of crystals." Orig. art. has 4 figures.

ASSOCIATION: 00

SUBMITTED: 00 DATE ACQ: 16Apr63 ENCL: 00

SUB CODE: CH, PH, MA, EL. NO REF SOV: 006 OTHER: 003

Card 2/2

NIKITENKO, V. I.

Dissertation defended for the degree of Candidate of Physicomathematical Sciences at the Institute of Crystallography in 1962:

"Inner Stresses and Dislocations in Monocrystals of Silicon and Germanium."

Vest. Akad. Nauk SSSR. No.4, Moscow, 1963, pages 119-145

S/032/63/029/002/020/028
B101/B186

AUTHORS: Nikitenko, V. I., and Indenbom, V. L.

TITLE: Polarization inframicroscope and its application for studying silicon

PERIODICAL: Zavodskaya laboratoriya, v. 29, no. 2, 1963, 222 - 225

TEXT: A polarization infrared microscope is described which consists of an ordinary МИН-4 (MIN-4) polarization microscope with Nicols, a ВЭИ-3 (VEI-3) electron-optical converter and an ОИ-24 (OI-24) lamp with infrared filter. The pictures visible on the converter screen are photographed. The stresses were measured quantitatively by means of quartz-, calcite, or mica compensators. Macro- and microstresses with phase differences of 5 - 10 mμ were found in silicon; phase differences of 2 - 3 mμ could still be detected. Microphotographs were made of: (1) stress in the cross section of a silicon crystal which, during its growth, was subjected to inhomogeneous plastic deformation; (2) residual stress in the silicon crystal caused by the grinding of the sample; (3) the joint between a silicon lamella of 0.4 mm diameter and an aluminum wire 0.3 mm thick; (4) copper-decorated dislocations

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in silicon. The determination of stresses in joints between silicon and metal are important for the production techniques of semiconductor apparatus. The polarization inframicroscope can also be used to study the stresses in semiconductors, ferrites, and in mineral ores. There are 5 figures.

ASSOCIATION: Institut kristallografii Akademii nauk SSSR (Institute of Crystallography of the Academy of Sciences USSR)

L 38608-65 EWT(l)/EWT(m)/EEC(t)/T/EWP(t)/EEC(b)-2/EWP(b)/EED(b)-3 Pz-4

ACCESSION NR: AP5005310 S/0181/65/007/002/0622/0624

IJP(c) JD/JG/GG

AUTHOR: Nikitenko, V. I.; Martynenko, G. P.

TITLE: Some photoelastic properties of gallium arsenide and silicon

SOURCE: Fizika tverdogo tela, v. 7, no. 2, 1965, 622-624

TOPIC TAGS: gallium arsenide, silicon, photoelasticity, dispersion curve, infrared spectrum, cubic crystal

ABSTRACT: In view of the importance of the polarization-optical method of stress investigation to the solution of many important problems in solid state physics and semiconductor industry, the authors show that the photoelastic constants of cubic crystals of classes T_d, O, and O_h can be determined for samples with one fixed crystallographic axis (loading or observation), in the following two cases: (a) when loading along a fixed axis makes the crystal optically uniaxial (and not biaxial), and (b) when the birefringence observed along a fixed axis does not depend on the direction of loading in the plane perpendicular to this axis. The photoelastic constants were measured with a level press which produced a uniform stressed state (compression) in the sample, and an optical system which makes it

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L 38608-65
ACCESSION NR: AP5005310

possible to measure the birefringence produced in the crystal. An electron optical converter was used to change the infrared radiation into visible light. The results yielded the dispersion of the photoelastic constants of gallium arsenide and of silicon for the near infrared region of the spectrum. The photoelastic constants were observed to be strongly dependent on the wavelength, with especially strong dispersion at the absorption edge. This wavelength dependence cannot be attributed to the dispersion of the refractive index but is a feature of semiconductors. "The authors thank M. V. Klassen-Neklyudova and V. L. Indenbom for support and a discussion of the results, and L. N. Mikhaylov and A. I. Bober for supplying the material necessary for the research." Orig. art. has: 1 figure and 4 formulas.

ASSOCIATION: Institut fiziki tverdogo tela AN SSSR, Moscow (Institute of Solid State Physics, AN SSSR)

SUBMITTED: 16Jun64 ENCL: 00 SUB CODE: SS, OP

NR REF SOV: 002 OTHER: 006

Card 2/2

ACC NR: AT7002162 SOURCE CODE: UR/0000/66/000/000/0145/0150

AUTHOR: Nikitenko, V. I.

ORG: none

TITLE: Polarization-optical investigation of stresses produced by atomic dislocation

SOURCE: Vsesoyuznaya konferentsiya po polyarizatsionno-opticheskomu metodu issledovaniya napryazheniy. 5th, Leningrad, 1964. Polyarizatsionno-opticheskiy metod issledovaniya napryazheniy (Polarizing-optical method of investigating stresses); trudy konferentsii. Leningrad, Izd-vo Leningr. univ., 1966, 145-150

TOPIC TAGS: crystal dislocation, crystal dislocation phenomenon, internal stress, optic measurement

ABSTRACT: Quantitative results of investigation of microstresses around individual edge dislocations appearing in single crystals without application of external loads are presented. Experimentally obtained lines of equal birefringence intensity generated by stresses due to edge dislocations obtained for a Si crystal are compared to theoretical values resulting in complete agreement after successfull compensation is made for macrostresses due to sum effect of other distant sample dislocations. The decrease in tangential stresses in the slip plane as the distance from dislocation is increased agrees with the theory for distances between 25 and 100μ. The physical theory of internal stresses which views dislocations as primary sources of

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ACC NR: AT7002102

microstresses which give rise to macrostresses in single crystals was successfully verified by observing a series of ordered dislocations. In conclusion, the author expresses his deep gratitude to M. V. Klassen-Neklyndova and V. L. Indenbom for supervising the work and support in the investigations. Orig. art. has: 4 formulas and 4 figues.

SUB CODE: 20/ SUBM DATE: 14Jun66/ ORIG REF: 007/ OTH REF: 002

Card 2/2

109-3-6/22

A Method for the Determination of [illegible] according to time.

[illegible] above all determined by the maximum steepness of the [illegible] inclinations. The evaluation of the [illegible] of measurements according to the time of increase (rise) of a signal, which is at present used, is not always correct or [illegible] connected with the form of the signal and the [illegible] alteration of its magnitude.
(11 illustrations and 1 Slavic reference)

ASSOCIATION: [illegible]
PRESENTED BY:
SUBMITTED: 1.7.1956
AVAILABLE: Library of Congress

Card 2/2

Accuracy of the Time Measurements in Sloping Signals

$$\Delta t = \frac{I_o(1 - d)(k - 1)}{kS_{\partial}F'(t_2)} \qquad (4)$$

where $F(t)$ is the input signal, d is the measuring level, k is the reduction of the signal below the reference level d, and S_{∂} is the dynamic slope of the tube characteristic. If the signal is in the form of a Gaussian pulse, i.e.

$$F(t) = Ae^{-\alpha t^2},$$

the error can be expressed by Eq.(6). The error, as a function of d for three types of input signal, is plotted in Figure 3. If a diode is connected in parallel with the secondary winding of the transformer of Figure 1, each signal produces a single "fixing" pulse. The error in determining the "fixing" pulse, with

respect to the time scale is dependent on the duration of the pulse. It is shown that the duration is given by:

$$\tau = \frac{L}{R} \ln \frac{RMS}{L} \qquad (8)$$

where $S = I_S/e_0$, in which I_S represents the saturation current of the tube, and e_0 represents the operating voltage. From Eq.(8), it is seen that the duration of the pulse, τ, is determined by the parameters of the circuit and is independent of the reference level or the amplitude of the input signal, provided the amplitude is not too small. If R is comparatively small, τ can be expressed by Eq.(9). An experimental investigation of the circuit of Figure 1 was carried out and it was found that the length of the "fixing" pulse can be determined from Eqs.(8) or (9) with an error of about 15 to 20%. The oscillograms of Figure 6 show that the duration of the "focusing" pulse is almost independent of the reference level. The experimental results illustrating the error due to the initial current

Accuracy of the Time Measurements in Sloping Signals

I_0 are given in Figure 7. The curves are plotted as a function of k for various values of $U_0 = I_0 R$. There are 7 figures and 1 Soviet reference.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut imeni V.I. Ul'yanova (Lenina) (Leningrad Institute of Electrical Engineering imeni V.I. Ul'yanov (Lenin).

SUBMITTED: March 21, 1957

1. Radio signals--Analysis

SOV/142-58-4-6/30

AUTHOR: Nikitenko, V.I.

TITLE: Comparison of Methods for the Time Fixation of Sloping Signals (Sravneniye metodov vremennoy fiksatsii pologikh signalov)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Radiotekhnika, 1958, Nr 4, pp 422-429 (USSR)

ABSTRACT: Various methods of time fixation of signals are compared taking into account the effect of harmonic signals. The paper also investigates the method for fixing symmetrical signals that reduce the effect of the disturbance signals on the accuracy of fixation. The disturbance signals are mostly of a harmonic, or fluctuating nature so that in fixation of the sloping pulses the basic fixation error is determined by the pulses with a frequency of the power supply (normally 50 hertz). The author also discusses the time fixation of symmetrical signals, where a fixing pulse of short duration can be created that represents the time

Card 1/4

Comparison of Methods for the Time Fixation of Sloping Signals

signals. Comparative evaluation of the accuracy of various time fixation methods enables the best method for a given signal form to be selected. In the symmetrical signals fixation method, the accuracy of fixation depends less on the effect of the disturbance pulses (compared with the other methods). However, with especially accurate measurements, when the disturbance pulses are particularly small, the second method is the most accurate one, a fact which may be explained by the relative complexity of the circuit and the increase in the unstabilizing factors connected with it. The selection of the reading level must correspond to the point of greatest curvature of the signal's slope. Thus the 2 last methods (especially the third) permit an increase in the measuring accuracy with or without the presence of disturbance signals. There are 4 graphs, 1 diagram and 2 Soviet references.

ASSOCIATION: Kafedra radiopriborov Leningradskogo elektrotekhnicheskogo instituta imeni V.I.Ul'yanova (Lenina)

NIKITENKO, V.I.

Discriminator as a detector with high selectivity. Izv.vys.ucheb.zav.; radiotekh. no.5:527-532 S-O '58. (MIRA 12:1)

1. Rekomendovano kafedroy radiopriborov Leningradskogo elektrotekhnicheskogo instituta imeni V.I. Ul'yanova (Lenina).
(Radio frequency modulation--Receivers and reception)

SOV/120-59-2-29/50

AUTHORS: Nikitenko, V.I., and Pogoyev, A.N.

TITLE: The Conversion of Harmonic Signals into Short Duration Pulses (Preobrazovaniye garmonicheskikh signalov v impul'sy maloy dlitel'nosti)

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 2, pp 108-110 (USSR)

ABSTRACT: Experimental results are given for a method (proposed in Refs 1 and 2) which considerably increases the accuracy of conversion. When the amplitude of the input is doubled the time-error is less than one part in 10^4 of the signal period. Usual methods of conversion use squaring and differentiation. The better way, shown in Fig 1 as a comparator, uses a strong feedback to generate a pulse whenever the signal changes polarity. The modification of Fig 2 includes a clamping arrangement whose level of operation is controlled by the voltage divider R. The oscillograms of Fig 3 show the generation of the clamped pulse which may be easily separated from the original waveform. Experimental data were obtained on two identical circuits, one of which triggers the scan on an SI-1 or 25-I oscilloscope and the other drives a blocking oscillator to produce a 2 μ pulse. Fig 4 shows how the conversion error depends on

Card 1/3

The Conversion of Harmonic Signals into Short Duration Pulses

harmonic drive amplitude (k = percentage input) and various diode-heater voltages at a frequency of 150 cycles/sec when using the circuit of Fig 1. Fig 5 refers to readings at 100 and at 50 cycles/sec and various valve (6Zh3) heater voltages when using the clamp circuit of Fig 2. The error in the latter case is less than 0.01% and is more than an order better than for a simple comparator. Accurate conversion of signal in the range 1 - 100 cycles/sec is made difficult by stray 50 cycles/sec fields from heaters and other sources; this produces a blurring on the screen of the oscilloscope. This topic is treated in Ref 3. Variable phase shift of the output pulses can be provided by altering the voltage divider R but this is not to be recommended since the output amplitude is affected. It is better to shift the phase of the harmonic input using for example the synchro type VTM as quoted in Ref 4: with such an arrangement the frequency change of 1% produces a spurious phase shift of about 0.5° and an amplitude change of 0.5%.

SOV/120-59-2-29/50

The Conversion of Harmonic Signals into Short Duration Pulses

There are 6 figures and 4 Soviet references.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut
(Leningrad Electrical Engineering Institute)

SUBMITTED: May 22, 1958

Card 3/3

9 (2, 9)

06354
SOV/142-2-4-7/[illegible]

AUTHORS: Nikitenko, V.I., Ivanov, A.A.

TITLE: A Variable Transformer Circuit for Phase Shifting Within the Limits of 2π

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, 1959, Vol 2, Nr 4, pp 431-436 (USSR)

ABSTRACT: The authors discuss a phase shifter circuit with a VTM variable transformer, which provides a continuous phase shift within the limits of 2π, linearly depending on the angle of rotation of the transformer rotor. The errors are determined, caused by inaccurate selection of the circuit parameters and by changes in the signal frequency. Recommendations are given for eliminating these errors. The dependences are derived for the relative change of the amplitude of the output signal, depending on the angle of rotation of the transformer rotor. The circuit arrangement with a VTM variable transformer is considerably simpler in tuning and produces less errors than the circuit arrangement where

Card 1/2

A Variable Transformer Circuit for Phase Shifting Within the Limits of 2 π

the signal is fed to the stator coil. The presence of two RC filters complicates tuning, but eliminates the errors caused by a design deficiency of the transformer - the unequality of the stator windings. The results, obtained in this paper, may be used for determining the errors of a phase shifter caused by the factors considered in this article. They also provide the determination of the parasite amplitude modulation in case of a continuous rotation of the rotor. The publication of this article was recommended by the Department of Electroacoustics of the Leningradskiy elektrotekhnicheskiy institut imeni V.I. Ul'yanova (Lenina) (Leningrad Electrical Engineering Institute imeni V.I. Ul'yanov (Lenin)). There are 2 circuit diagrams, 2 sets of graphs, and 1 Soviet reference.

SUBMITTED: January 5, 1959 (August 1, 1958)
Card 2/2

S/058/61/000/003/009/027
A001/A001

Translation from: Referativnyy zhurnal, Fizika, 1961, No. 3, p. 299, # 3E165

AUTHORS: Bondarenko, A. V., Nikitenko, V. I.

TITLE: Electric Conductivity of Synthetic Ceresin in the Melting Temperature Range

PERIODICAL: "Tr. Novocherkassk. politekhn. in-ta", 1959, Vol. 73, "Raboty Kafedry fiz.", pp. 43-46

TEXT: Specific resistivity ρ_v of synthetic ceresin grows with temperature. The different course of dependence of ρ_v on temperature at 40-57 and 57-110°C is explained by the fact that higher-molecular components participate in the mechanism of electric conductivity; moreover, this is also the result of the effect of low-molecular (paraffin) fractions contained in synthetic ceresin. This is confirmed by changes in mechanical and optical properties of synthetic ceresin at the 57°C temperature. The deviation of the temperature-dependence of ρ_v at heating from the analogous curve at cooling is explained by the orientation of the structural elements of synthetic ceresin during cooling in the presence of an electrical field.

V. Kuchin

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

DIANOV, D.B.; MERKULOV, L.G.; NIKITENKO, V.I.

Precipitation of zinc oxide aerosols in an acoustic field. Akust. zhur. 8 no.1:60-66 '62. (MIRA 15:4)

1. Leningradskiy elektrotekhnicheskiy institut imeni V.I.Lenina (Ul'yanova).
(Aerosols) (Zinc oxide) (Ultrasonic coagulation)

NIKITENKO, V.I.; TURUBAROV, V.I.

Apparatus for precipitating particles of zinc oxide aerosols in a low-frequency acoustic field. Akust.zhur. 8 no.3:370-372 '62. (MIRA 15:11)

1. Leningradskiy elektrotekhnicheskiy institut im. V.I.Ul'yanova (Lenina).
(Sound--Apparatus) (Precipitation (Chemistry)) (Zinc oxide)

NIKITENKO, V.I.; TURUBAROV, V.I.

Precipitation of zinc oxide in a low-frequency acoustic field.
Lakokras.mat.i ikh prim. no.1:61-64 '63. (MIRA 16:2)
(Zinc oxide) (Aerosols)

L 5034-66 EWT(m)/EPF(c)/EPA(w)-2/T/EIC(m) DS/WW/JAJ

ACCESSION NR: AP5024021 UR/0069/65/027/005/0731/0734
541.18:537

AUTHOR: Nikitenko, V. I.

TITLE: Interaction of neutral aerosol particles in a homogeneous electric field

SOURCE: Kolloidnyy zhurnal, v. 27, no. 5, 1965, 731-734

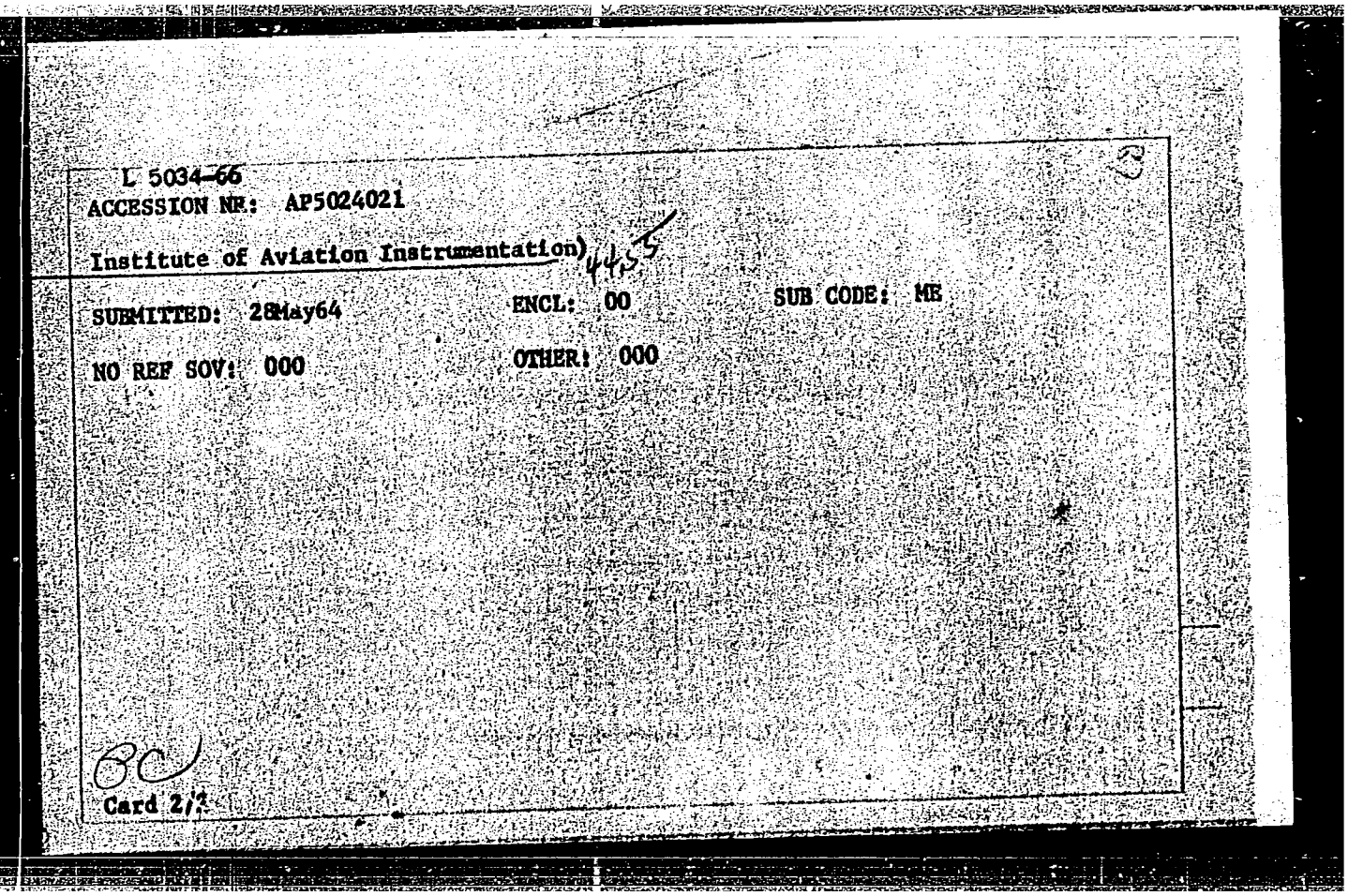
TOPIC TAGS: aerosol, electric field, coagulation

ABSTRACT: When neutral aerosol particles are in a homogeneous electric field, ponderomotive forces of interaction arise which cause the aerosol to coagulate. The coagulation rate depends on the concentration and size of the particles, strength of the electric field, and ratio of the dielectric constant of the particles to the dielectric constant of the gaseous medium. A calculation of the time of approach of particles acted upon by the ponderomotive forces shows that for particles with $a \approx 1$ (a being the particle radius), this time for $r/a \approx 50$ (r being a polar coordinate) is measured in seconds in real aerosols, i.e., the coagulation process is relatively fast. Orig. art. has: 1 figure.

ASSOCIATION: Leningradskiy institut aviatsionnogo priborostroyeniya (Leningrad

Card 1/2

09010166



L 5034-66
ACCESSION NR: AP5024021

Institute of Aviation Instrumentation) 44,5

SUBMITTED: 28May64 ENCL: 00 SUB CODE: ME

NO REF SOV: 000 OTHER: 000

BC

Card 2/2

NIKITENKO, V.I.

Behavior of the neutral particle of aerosol near the interface of two media in a homogeneous electric field. Zhur. fiz. khim. 39 no.9:2178-2181 S '65. (MIRA 18:10)

1. Leningradskiy institut aviatsionnogo priborostroyeniya.

Thermomagnetic and magnetic properties of PbSe. Ya. S. Budzhak.

Certain anomalous properties of p-type PbTe. P. M. Starik, P. I. Voronyuk.

Galvanomagnetic and thermomagnetic effects in HgTe. N. V. Gavaleshko.

Production and electrical properties of HgSe and the system HgSe-HgTe. I. M. Rarenko, V. M. Nikitenko.

Electrical properties of In_2Se. I. M. Stakhira, A. N. Borets.

Report presented at the 3rd National Conference on Semiconductor Compounds, Kishinev, 16-21 Sept 1963

PLAKSIN, Yakov Grigor'yevich; FLEKKEL' Arkadiy Il'ich; NIKITENKO, Vasiliy Rodionovich; NOVIKOV, Grigoriy Porfir'yevich; SHTODA, Ivan Ivanovich; MARKOVICH,M.P.,kand.tekhn.nauk,dots., retsenzent; GRIGOR, V.I.,dots.,retsenzent; MITROKHIN,S.G., retsenzent; SLAVIN,D.S.,otv.red.; CHERNEGOVA,E.N.,red.izd-va; MAKSIMOVA,V.V.,tekhn.red.

[Principles of building and mining-engineering structures] Osnovy stroitel'nogo dela i gornoinzhenernye sooruzheniia. Izd.2., dop. i perer. [By] IA.G.Plaksin i dr. Moskva, Gosgortekhizdat, 1963. 463 p. (MIRA 16:12)
(Building) (Mine buildings)

GRISHCHENKO, Ye.D., NIKITENKO, V.V.

Incorporation of methionine into actomyosin and muscle tissue in chronic lead poisoning [with summary in English] Vop.med.khim. 2 no.5: 328-337 S-O '56. (MIRA 9:12)

1. Radiobiologicheskaya laboratoriya Instituta gigiyeny truda i professional'nykh zabolevaniy AMN SSSR, Moskva.

(METHIONINE, metabolism,
in exper. lead pois., binding by actomyosin & musc. tissue (Rus))
(MUSCLE PROTEINS, metabolism,
actomyosin binding methionine in exper. lead pois. (Rus))
(MUSCLES, metabolism,
methionine binding in exper. lead pois. (Rus))
(LEAD POISONING, experimental,
musc. tissue & actomyosin binding of methionine in (Rus))

GRISHCHENKO, Ye.D.; NIKITENKO, V.V.

Study of some biochemical and other factors in experimental acute lead poisoning; author's abstract. Farm. i toks. 21 no.1:81 Ja-F '58. (MIRA 11:4)

1. Radiobiologicheskaya laboratoriya (zav.-prof. E.B. Kurlyandskaya) Instituta gigiyeny i profzabolevaniy AMN SSSR.
(LEAD POISONING)

NIKITENKOV, V.Ye.; PHELKOVA, A.G.

Polyester phenylenesiloxane compounds. Plast. massy no.4:24-26 '65. (MIRA 18:6)

KRASNOYARSKIY, V.V.; NIKITENKO, Ye.A.

Adoption and exlpoitation of anticorrosive protection units on the Saratov-Moscow gas main. Gaz.prom. 4 no.9:42-46 S '59. (MIRA 12:11)

(Gas, Natural--Pipelines)
(Corrosion and anticorrosives)

NIKITENKO, Yu.A.; KRASNOYARSKIY, V.V.

Cathodic protection of the Saratov - Moscow gas line. Gaz prom. 5 no.5:37-40 My '60. (MIRA 14:11)
(Gas, Natural--Pipelines--Cathodic protection)

S/095/60/000/009/004/005/XX
A053/A026

AUTHOR: Nikitenko, Ye.A., Engineer

TITLE: Greater Efficiency in the Electrochemical Protection of Pipelines

PERIODICAL: Stroitel'stvo Truboprovodov, 1960, No 9, pp 6 - 9

TEXT: The article describes the conclusions drawn from observations of actual operation of the two pipelines Saratov-Moscow and Bryansk-Moscow. On the former, having a diameter of 325 mm and extending over a distance of 426 km, it was found necessary to establish 57 СКЗ (SKZ) (stations for corrosive protection), whereas on the pipeline Bryansk-Moscow, having a diameter of 529 mm and covering a distance of 413 km only 16 such stations were needed, which is 3.5 times less, representing 6.5 times less power consumption per m^2 of protected pipeline surface. Both pipelines have bitumen insultation and there is hardly any difference in the soil composition of the two lines. The explanation for less power consumption is to be found in the higher quality of insulation on the Bryansk-Moscow pipeline, to which contributed post-operational verification during the process of pipe laying and the utilization of detectors ДР -12 (DR-12), verifying the dielectric properties of the insulation. As a rule the number of SKZ stations

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S/095/60/000/009/004/005/XX
A053/A026

Greater Efficiency in the Electrochemical Protection of Pipelines

installed along the pipeline depends upon the location of the power supply sources. For effective protection power supply to the SKZ station must be uninterrupted and the tension in the network stable. Increased tension raises the potential and incurs danger of interfering with the adhesion of the insulation near the drainage point. Low tension results in zones of unstable protection. In view of the absence of automatic means of regulating the potential, it is necessary to install tension stabilizers and protectors between stations. This method has been adopted by the main gas lines of the Moscow Administration. Particular interest deserves the additional anode grounding system of the SKZ stations of the Saratov-Moscow pipeline. In addition to the grounding opposite the drainage point there exists an extended anode grounding established at a certain distance from the SKZ station. A similar grounding system is also installed for the protection of the branch pipeline connecting with Ryazan'. In this case the SKZ station is combined with the GRS (gas regulating station) having a basic and a supplementary grounding at a distance of 1 km on the branch line. The distance between the additional extension anode grounding and the SKZ station is limited, beyond that limit loss of power in the thermostat of the basic grounding is excessive. The question as to which is the ideal distance has not yet been

Card 2/4

Greater Efficiency in the Electrochemical Protection of Pipelines

decided. On the 7 SKZ stations over a distance of 17.5 km on the pipeline Saratov-Moscow, anode groundings were situated 70 - 100 m away from the line. However, the removal of SKZ station No. 93 to a distance of 1.5 km widened the zone of protection, with the result that four stations, Nos. 92, 95, 96, and 97, could be cut out. The protecting current has increased from 2 to 7 amp, although the overall current of the entire section has remained unchanged in both cases. From these observations it can be concluded that the distance to which anode grounding can be withdrawn is limited in view of the loss of power incurred in the anode circuit. The question of distance is one that requires investigation in each individual case. Thus, in uniform soil corresponds with each distance a determined zone of protection, whereas in heterogeneous soil the zone of protection does not change with the distance of grounding due to the fact that the path of the current follows the line of least resistance between anode and point of drainage. Considering the problem of wear (period of destruction) of anode grounding devices, the author describes certain means which have proved most effective in making these devices last longer. Besides proposing various alloys, the article explains the design of a grounding steel bar surrounded by compress-

S/095/60/000/009/004/005/XX
A053/A026

Greater Efficiency in the Electrochemical Protection of Pipelines

ed granules, from which the current flows off without disintegrating the surface of the grounding bar. There are 5 figures, 2 tables and 2 Soviet references.

Card 4/4

L 35589-65 EWT(m)/EWP(b)/EWA(d)/EWP(t) JD/WB

ACCESSION NR: AT3007224 S/2951/63/000/000/0359/0367 17 16 841

AUTHOR: Mikhaylovskiy, Yu. N.; Tomashov, N. D.; Nikitenko, Ye. A.

TITLE: Unilaterally polarized metallic protectors for electrochemical prevention of corrosion caused by stray currents in underground equipment

SOURCE: Korroziya metallov i splavov; sbornik. Moscow, Metallurgizdat, 1963, 359-367

TOPIC TAGS: corrosion protection, underground equipment, electrochemical process, electric drainage

ABSTRACT: The general principles of protectors in underground corrosion prevention are studied. It is shown that a system of unilaterally polarized protectors may be used where there are relatively low stray underground currents. The corrosion prevention method which is examined is free of many of the disadvantages inherent in the electrical drainage method. The proposed system automatically draws off the current from the underground equipment in the anode zones and prevents the current in the cathode zones from reaching the equipment through the protector. The effectiveness of the method is determined by the electrochemical characteristics of the protector. Protectors made of various metals (including

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L 35589-65

ACCESSION NR: AT3007224

iron) may be used, depending on individual conditions. It is shown that alterating stray currents in the earth may be used for corrosion prevention in pipelines, underground cables, etc. In this case, iron protectors are most suitable. "The authors express their sincere thanks to V. V. Leonov for his help in carrying out the experimental part of this work." Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

NO REF SOV: 009 OTHER: 002

Card 2/2

21927
S/193/61/000/004/002/007
A004/A101

18.8310 also 1138 1573

AUTHORS: Nikol'skiy, K. K., Nikitenko, Ye. A.

TITLE: Corrosion protection of underground metal structures

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, no. 4, 1961, 15 - 18

TEXT: In their article the authors present a detailed survey on the methods and means of protecting underground metal structures like gas and oil pipelines, water and heating mains, electric cables etc. from corrosion by aggressive media and stray currents. They point out that during 1959 - 1965 the extent of main gas pipelines in the Soviet Union will increase by 26,000 km, that of oil pipelines by 29,000 km, while the total extent of pipelines will amount to 85,000 km by 1965. The network of electrified railroads will be increased 3 times. 20,000 km of railroad lines will be electrified, including 11,000 km on direct current and 9,000 km on alternating current. The extent of street-car tracks alone in the towns of the RSFSR will grow by 1,083 km. The aggressive effect of various soil grades on steel pipelines is judged by its specific resistance determined along the run of the underground structure with three or four-electrode installations with the aid of the МС-08 (MS-08) device or ЭП-1 (EP-1) potentiometer. Insulation coatings are selected depending on the soil aggressiveness.

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21927

S/193/61/000/004/002/007
A004/A101

Corrosion protection of underground metal structures

The most widespread insulation materials are bitumen and bitumen-rubber combinations. As wrappers for bitumen insulation "gidroizol" is used, while "brizol" is employed for bitumen-rubber insulations. Lately masticated rubber is used for insulation purposes. The ПИЛ("PIL") polyvinyl chloride adhesive tape is produced on the base of polyvinyl chloride resin, masticators, various heat stabilizers and dyestuff. The "PIL" tape is glued onto the piping with the aid of a special glue composed of a perchlorovinyl resin, tricresylphosphate and butyl acetate. The "PIL" tape is wound on the pipes by the ИМЛ(IML) insulation machines. The corrosion effect of soils and waters on lead-sheathed cables is determined in laboratories by the amount of organic and nitric substances, general hardness and pH-value of the medium. The quality of coatings is checked by various devices. The MT-57 magnetic thickness gage determines the insulation thickness without damaging the coating. Spark flaw detectors check the continuity of the insulation The following models were shown at the exhibition: ИДИП (IDIP) intended for the checking of pipe insulation prior to being laid in the ground: ИПИТ(IPIT) and ИПИГ(IPIG) for the determination of the insulation quality after the pipes have been laid in the trenches and preliminarily covered with earth. The following instruments are intended to check the corrosion state of structures underground: type M-231 portable voltammeters of magneto-electric system with an input resist-

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S/193/61/000/[illegible]/012/[illegible]
A004/A101

Corrosion protection of underground meta. structures

ance of 20 k-ohm per scale volt, type ВАК -2 (VAK-2) voltammeters with an input resistance of 150 k-ohm per scale volt, chemical-electronic (?) [Abstractor's note: The original Russian adjective reads "khimotronnyy"] integrators making it possible to obtain the mean values of the measured potential differences of both polarities, and the Н-373-3 (N-373-3) recorder with self-contained power supply intended to record the potential differences and currents depending on the effect of stray currents in the ground. The authors point out the following trends in the development of the measuring technique of corrosion effects: a) the development of portable high-resistance devices of the magneto-electric system for visual measurements; b) the development of portable high-resistance (150 - 500 k-ohm per scale volt) instruments utilizing transistorized d-c amplifiers; c) the fabrication of portable high-resistance (60 - 70 k-ohm per scale volt) recorders with self-contained power supply (accumulators); d) the use of chemical-electronic integrators making it possible to obtain directly the mean positive and mean negative values of stray currents; e) the development of portable devices to measure: specific ground resistance, pH-value of the ground, butt resistance of rails of electrified railroads; line detectors, thickness gages, flaw detectors, etc. The authors then cite the following polarized drainage devices employed to fight corrosion and stray currents: ПЭД-58 (PED-58),

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S/193/61/000/004/002/[illegible]
A004/A101

Corrosion protection of underground metal structures

ПГД-200 (PGD-200), УПДУ-57 (UPDU-57), РПД-ЦНИИ55 (RPD-TsNII-55), РПД-53 (RPD-53), Сэв (Sev) ПГД-100 (PGD-100), ПЭД-АКХ-54М (PED-AKKh-54M). Besides electromagnetic polarized drainage devices valve drains are being put into service fitted with powerful Д-304 (D-304) and Д-305 (D-305) germanium diodes. The following cathode stations are used to protect underground structures from corrosion: КСС-1 (KSS-1), КСС-2 (KSS-2), КСС-3 (KSS-3), Кс-400 (Ks-400), КСГ-500-1 (KSG-500-1), stations supplied from the communication lines and from wind-driven electric generators. The authors cite the following trends in the development of cathode stations: differentation according to power and purpose, increasing the efficiency owing to the utilization of germanium diodes in the rectifying circuits, making use of the wind power for cathode protection. The costs of the cathode protection can be considerably lowered if various types of graphitized electrodes are used as anode ground systems, since they are dissolved during the operation process 10 - 20 times slower than steel electrodes. The graphite lubrication of rail butt joints considerably reduces their resistance. Owing to the extensive development of the network of underground metallic structures, a combined electro-drainage and cathode protection of communication cables and pipelines from corrosion is being introduced lately. There is 1 figure.

[illegible] 4/4

NIKITENKO, Yevgeniy Aleksandrovich; PEREVERZEV, V.V., ved. red.; FEDOTOV, I.G., tekhn. red.

[Electrochemical protection of gas mains against corrosion] Elektrokhimicheskaia zashchita magistral'nykh gazoprovodov ot korrozii. Moskva, Gostoptekhizdat, 1962. 231 p. (MIRA 15:9)

(Pipelines—Corrosion) (Cathodic protection)

ZAREMBO, L.K., kand. fiz.-mat. nauk; KARPOV, A.K., inzh.; LEGOSTAYEV, P.Ya., kand. tekhn. nauk; GRODSKIY, Yu.N., kand. tekhn. nauk; KHRENOV, N.S., inzh.; KHODANOVICH, I.Ye., kand. tekhn. nauk; BRISKMAN, A.A., kand. tekhn. nauk; GORODETSKIY, V.I., inzh.; NIKITIN, A.A., inzh.; GILL', B.V., inzh.; KRAYZEL'MAN, S.M., inzh.; DZHAFAROV, M.D., inzh.; LUNEV, A.S., kand. tekhn. nauk; NIKITENKO, Ye.A., inzh.; YERSHOV, I.M., kand. tekhn. nauk; ZAYTSEV, Yu.A., inzh.; MAGAZANIK, Ya.M., inzh.; SHAROVATOV, L.P., inzh.; RABINOVICH, Z.Ya., inzh.; BIBISHEV, A.V., inzh.; ASTAKHOV, V.A., dots.; KOMYAGIN, A.F., kand. tekhn. nauk; ANDERS, V.R., inzh.; SERGOVANTSEV, V.T., kand. tekhn. nauk, dots.; UTKIN, V.V., inzh.; KUZNETSOV, P.L., inzh.; MAMAYEV, M.A., inzh.; SVYATITSKAYA, K.P., ved. red.; FEDOTOVA, I.G., tekhn. red.

[Handbook on the transportation of combustible gases] Spravochnik po transportu goriuchikh gazov. Moskva, Gostoptekhizdat, 1962. 887 p. (MIRA 15:4)
(Gas, Natural--Transportation)

S/278/63/000/002/003/003
A052/A126

AUTHORS: Nikitenko, Ye. A., Nikol'skiy, K. K.

TITLE: New devices for corrosion measurements and investigations

PERIODICAL: Referativnyy zhurnal, Tochnaya mekhanika, optika i ispytatel'naya apparatura, no. 2, 1963, 30, abstract 2.40.219 (Gaz. prom-st', no. 8, 1962, 48 - 51)

TEXT: The M -231 (M-231) device represents a high-ohmic, multilimit portable d-c volt-ammeter with zero in the middle of the scale. It is designed for measuring amperage and voltage in d-c circuits when protecting underground metal constructions against corrosion. The device can be used at an ambient temperature of from -30 to +50°C and a relative humidity of up to 80%. The BAK -2 (VAK-2) device is a high-ohmic multilimit portable d-c volt-ammeter with zero in the middle of the scale and is to measure the potential drop and currents when carrying out work for protecting underground metal constructions against earth and stray-current corrosion. The portable multilimit self-recording magnetoelectric microampere millivolt meter H373-3 (N373-3) is used for recording po-

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New devices for corrosion measurements and...

tentials and currents when protecting gas mains against earth and stray-current corrosion. A two-point "chemotronic" (khimotronnyy) integrator is designed for the simultaneous determination of the mean value of stray-current potentials in two points of an underground gas line.

M. G. S.

[Abstracter's note: Complete translation]

TOMASHOV, N.D., MIKHAYLOVSKIY, YU.N., LEONOV, V.V. AND NIKITENKO, YE.A.

"Electrochemical protection of buried structures from stray current corrosion by means of unilaterially polarizing anodes."

Report submitted to the Second Intl. Congress on Corrosion of Metals
New York City 11-15 March 1963

INSTITUTE OF PHYSICAL CHEMISTRY , MOSCOW

NIKITENKO, Ye.A.

Installation of stations for the drainage protection of gas pipelines. Zashch. trub. ot kor. no.5:12-16 '62, (MIRA 17:7)

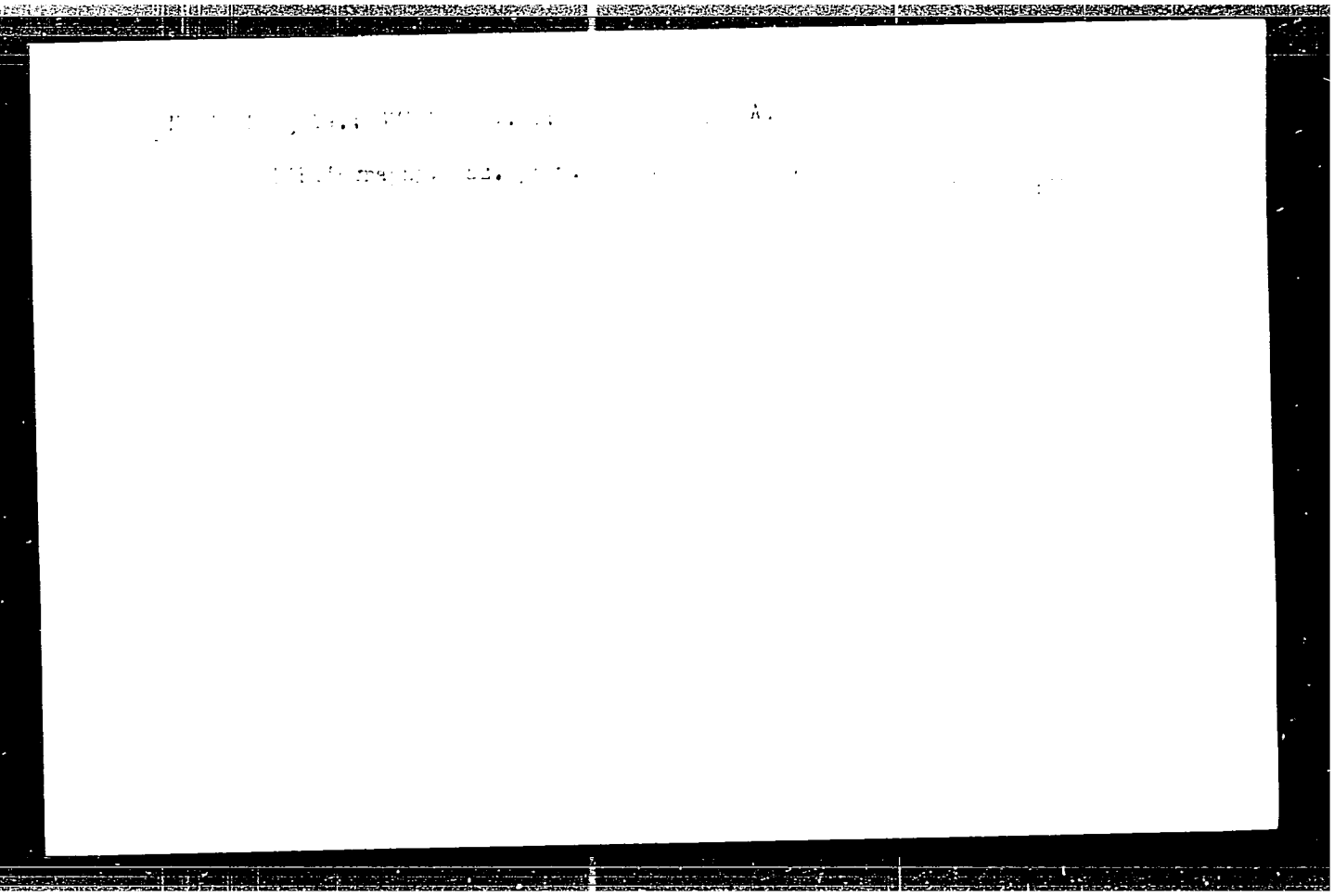
1. Moskovskoye upravleniye magistral'nykh gazoprovodov.

MIKHAYLOVSKIY, Yu.N.; NIKITENKO, Ye.A.; LEONOV, V.V.; TOMASHOV, N.D.

Electrochemical protection of gas pipelines from corrosion caused by stray currents. Gaz. prom. 7 no.9:37-42 '62.
(MIRA 17:8)

NIKITENKO, Ye.A.

Predicting ground corrosion and the lifetime of gas pipelines.
Gaz. prom. 9 no.7:44-49 '64. (MIRA 17:8)



NIKITENKO, Ye.A.

Effect of the hydrogen index of the ground and the content in it of chlorides and sulfates on the corrosion of a gas pipeline. Gaz. delo no.9:24-27 '64. (MIRA 17:11)

1. Moskovskoye upravleniye magistral'nykh gazoprovodov.

NIKITENKO, Ye.A.

Effect of the meteorological factor on the corrosion conditions along the route of a pipeline. Neft. khoz. 43 no.2:55-59 F '65. (MIRA 18:4)

NIKITENKO, Ye.A.

Analyzing the cost for the repair of coatings and corrosion damage of a gas pipeline. Gaz. delo no.11:27-29 '64.
(MIRA 18:2)

1. Moskovskoye upravleniye magistral'nykh gazoprovodov.

NIKITENKO, Ye.A.

Relation between the quantity and depth of the cavities of a petroleum pipeline. Transp. i khran. nefti i nefteprod. no.1: 10-12 '64. (MIRA 18:2)

1. Moskovskoye upravleniye magistral'nykh gazoprovodov.

NIKITENKO, Ye.A.

Reliability of the electrochemical protection of pipelines.
Gaz. delo no.12:23-25 '64. (MIRA 18:2)

1. Moskovskoye upravleniye magistral'nykh gazoprovodov.

NIKITENKO, Ye.A.

Effect of defects of asphalt insulation coatings on corrosion of gas lines. Gaz. prom. 9 no.12:50-52 '64. (MIRA 18:1)

NIKITENKO, Ye.A.

Corrosion map for a pipeline. Transp. i khran. nefti i nefteprod. no.5:13-17 '65. (MIRA 18:10)

1. Moskovskoye upravleniye magistral'nykh gazoprovodov.

NIKITENKO, Ye.A.

Distribution of corrosion damage along the circumference of a pipeline. Gaz. delo no.5:20-23 '65. (MIRA 18:6)

1. Moskovskoye upravleniye magistral'nykh gazoprovodov.

NIKITENKO, Ye.A.

Screw node grounding electrodes of experimental cathode stations. Transp. i khran. nefti i nefteprod. no.5:28-30 '65. (MIRA 18:10)

1. Moskovskoye upravleniye magistral'nykh gazoprovodov.

NIKITENKO, Ye.A.

Double track stray-current drainage. Transp. i khran. nefti i nefteprod. no.7:12-13 '65. (MIRA 18:9)

1. Moskovskoye upravleniye magistral'nykh gazoprovodov.

NIKITENKO, Ye. A.

Dependence [illegible] gas pipeline [illegible] in ground [illegible] along [illegible] (MIRA 28:5)

[illegible]

NIKITENKO, Ye.A.; OLENEV, V.A.; VESELOVA, L.A.; KOLYADNYY, S.N.; PIVEN', V.D.; NED, G.D.

Reviews. Gaz. prom. 10 no.6:51-52 '65. (MIRA 18:6)

KOVALENKO, K.O.; NIKITENKO, Ye.D., red.

[Pavel Apollonovich Tutkovskii, [illegible]; a bibliographical index] Pavlo Apolonovych Tutkovskyi, [illegible]; bibliohrafichnyi pokazhchyk. Kyiv, [illegible], [illegible]. [illegible]

[illegible] Akademiia nauk [illegible], Kiev.

VASHCHENKO, Zakhar Markovich. OVCHARENKO, F.D., akademik, otv. red.; NIKITENKO, Ye.D., red.

[Chemical mineral raw materials of the Ukrainian S.S.R. (1817-1963); a bibliographic index to the literature] Khimichna mineral'na syrovyna Ukrains'koi RSR (1817-1963 rr.); bibliografichnyi pokazhchyk literatury. Kyiv, Naukova dumka, 1965. 158 p. (MIRA 18:9)

1. Akademiya nauk Ukr.SSR (for Ovcharenko).

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9.3279

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1959, No.12, pp. 247-248, # 25643

AUTHOR: Nikitenko, Yu.I

TITLE: On the Problem of Selectivity of Diode Detector

PERIODICAL: Uch. zap. Leningr. vyssh. inzh. morsk. uch-snche. 1956, No. 2, pp. 33-36

TEXT: In an ideal inertialess detector the modulation suppression of a weak signal by a strong one takes place. Conditions which must be satisfied by a detector in order to be an inertialess one, when signal and noise pass, are deduced. A real detector can be considered an inertialess one when the difference between the carrier frequencies of the signal and the noise exceeds the upper modulation frequency of the useful signal by a factor of 1.1-2. A detector becomes an inertia detector when the frequency of the interfering station differs considerably from

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On the Problem of Selectivity of Diode Detector

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the carrier frequency of the useful signal For this case, diagrams permitting the determination of the magnitude of selectivity of an inertia detector are plotted.

V.I.R.

Translator s note This is the full translation of the original Russian abstract

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NIKITENKO, Yu.I.

Errors in some radio navigational systems due to maladjustments in the receiver channel. Uch. zap. VIMU no. 2:37-46 Jl '56. (MIRA 11:8)

1. Kafedra radionavigatsionnykh ustroystv Leningradskogo vysshego inzhenernogo morskogo uchilishcha im. admirala Makarova.
(Radio direction finders)

BYKOV, V., kandidat tekhnicheskikh nauk; NIKITENKO, Yu., kandidat tekhnicheskikh nauk.

Errors of automatic radio direction finders with a trace system in presence of radio station interferences. Mor.flot 17 no.2:23-24 F '57. (MLRA 10:3)

1. ANII (for Bykov) .2.Leningradskoye vyssheye inzhenernoue morskoye uchilishche.

(Radio direction finders)